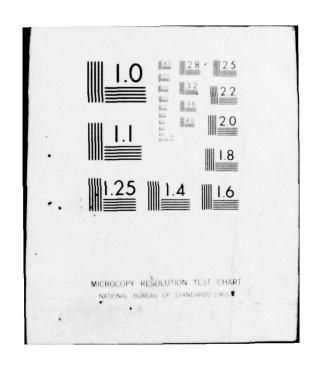
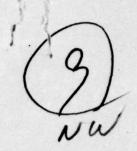
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## THE GERMAN HYDROGRAPHIC INSTITUTE IN 1975

[Zickwolff, G.; Das Deutsche Hydrographische Institut im Jahre 1975; Hansa, No. 113, January 1976; pages 87-88; German]

The maritime publications of the German Hydrographic Institute, approximately 70 in number, were updated with the following new publications and revisions in 1975; two nautical manuals appeared in new editions; supplements were issued for 17 manuals. Seven volumes of "Verzeichnis der Leuchtfeuer und Signalstellen" (Register of Lights and Signal Locations) appeared as a new edition; 12 supplements were required for each of the four volumes of the Nautischer Funkdienst (Marine Radio Service). Weekly circulation of "Nachrichten für Seefahrer" (Notices to Mariners) totaled 4,000.

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At this time we would like to thank the many captains and officers who supported the work of the DHI\*\* with 496 hydrographic reports.

\*\* German Hydrographic Institute.

The hydrographic charts (approximately 1,000) were further modernized and brought up to date. Additional international hydrographic charts were taken over by the DHI and reprinted, including three charts of the

<sup>\*</sup> Numbers in right margin indicate pagination in the original text.

North Sea. There were delivery problems in the spring of 1975, as routes searched for mines were eliminated and transit routes established in the western Baltic Sea: 50 German charts had to be replaced with "new additions" or "corrected reprints." Decca charts are now available for the entire Swedish coast up to the rocky islands by Stockholm; for the English and Scottish coasts the first charts with the Northumbrian Chain appeared. The series of special charts for sports fisherman was continued, with Nos. 3001 ("Lusbeck Bay") and 3002 ("Kiel Bay and Bay of Mecklenburg").

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The narrow-grid synoptic hydrographic survey off the west coast of Schleswig-Holstein, begun the previous year, was continued in the waters of the East Frisian Islands. The ships KOMET and SUDEROOG ran off fathom lines over a total distance of about 11,000 nautical miles in the North and Baltic Seas. ATAIR and WEGA checked 80 known wrecks and investigated 40 locations where underwater obstacles are thought to exist. In the process, 25 previously unknown wrecks were found.

Fifteen trips in the North and Baltic Seas by the survey and research ship GAUSS were designed primarily for the monitoring of pollution of the sea, sediment investigation and current and diffusion measurement, as well as prototype testing of radio D/F equipment.

The research ship METEOR made 3 voyages for the Deutsche Forschungsgemeinschaft (DFG)\* and one for the DHI as follows:

<sup>\*</sup> German Research Society.

At the beginning of 1975, scientific research on prolific upwelling off the northwest African coast was continued. In April and May, the METEOR participated in work preparatory to the international program for the investigation of pollution of the Baltic Sea, commencing in 1976. In June and July the DHI conducted geological and geophysical research in the vicinity of the Faeroe Island Ridge. The second part of this trip (in August and September) led into the northern area of the North Sea, for the purpose of investigations preparatory to the international FLEX '76 Expedition. From this "Fladengrund Experiment" we might learn the influence of currents, mixing and stratification upon processes involving the chemistry and biology of the sea. At the end of the year, geoscientific research on the West African continental margin was continued. The Integrated Navigation and Data Acquisition System (INDAS), financed by the DFG, was put into operation.

The survey and research ship KOMET conducted bathymetric, gravimetric and magnetic measurements between the Reykjanes Ridge and the Faeroe Island Ridge which permit an estimate of the age of the ocean seabed. To confirm this estimate, a deep sea bore hole will be drilled. A preliminary survey will also be made by KOMET, by means of seismic reflection profiles. This drilling is within the framework of the Deep Sea Drilling Project, in which the Federal Republic is participating.

Monitoring of harmful substances in the sea was intensified. In the Heligoland Bight and in the western Baltic Sea, 20 positions were established in each, from which ships will take samples of water and sediment

at least once a year to determine the presence of harmful impurities.

The effect of the discharge of titanium industrial waste was controlled, as in previous years. North Sea sediments were specially examined for deposits of chemical agents from rivers. In cooperation with the Fisheries Radiobiological Laboratory in Lowestoft, several investigations were made over a large area concerning distribution of radioactive nuclear fission products in the North Sea to obtain a more precise understanding of the movements of water masses (Radiological North Sea Program, RANOSP).

In 1975 DHI, as the authorizing and control agency for discharge of substances into the high seas, reviewed several proposals, the vast majority of which were rejected.

The DHI, with the support of the German Scientific Commission for Maritime Research, published weekly synoptic charts of the surface temperature of the North Sea, as well as several supplementary charts of water temperature in the vicinity of the seabed.

Research on sea state causation was successfully continued within the framework of the major international experiment JONSWAP (Joint North Sea Wave Project). Work was done on a procedure to predict sea state in the North and Baltic Seas.

The German Oceanographic Data Center continued the regular processing of oceanographic data obtained from German lightships and from the GATE experiment, and began to upgrade and exchange observations on oil pollution (ICOSS Marine Pollution Monitoring Pilot Project).

The scientific services of the DHI (tide and water level prediction,

storm flood warning, iceberg patrol, time service, terrestrial magnetic monitoring and testing of navigation instruments) were continued in the customary manner.

The era of tide predictions with the aid of mechanical calculators ended several years ago, and thus two glorious 'veterans' became ripe for the museum: the first German tide calculator, put into service in 1916, was donated to the maritime museum in Bremerhaven in the summer of 1975. A place of similar distinction is now being sought for its successor, the largest in the world (62 partial tides).

Further test and acceptance criteria and guidelines were developed as a result of maritime technical research, and new technical test procedures were developed. In November, a working group of the International Standards Organization (ISO) held a conference at the DHI. The objective of the working group is to adapt specifications for magnetic compasses and their installation on board ships to the latest technology and achieve international standardization.

For use aboard German vessels, 95 new or improved navigation instruments and ship systems were approved after testing prototypes. 18,200 separate tests were conducted by the DHI in Hamburg and by DHI branch offices, in addition to 3,320 acceptance trials and retests of radio D/F equipment. The branch offices at Duisburg-Ruhrort and Cuxhaven had to be phased out on grounds of efficiency. Testing there is being continued by private firms under contract with DHI.

In connection with recovery of raw materials on the German continental shelf, the DHI approved 28 proposals for seismic measurements, bottom

test borings and sand sampling. In addition, approval for five test drillings was granted.